

In the Specification:

Rewrite the following numbered paragraphs as indicated:

[0031] A voltage U_1 is applied from a voltage supply to permeable grid electrode 24 to produce an electric field. Ions produced by the corona discharge from wire 32 are transported through openings in electrode 24 due to this electric field. The ion production is, preferably, monitored and can be controlled by measuring the ionic current with a measuring electrode 36 (e.g. of aluminum foil), a shielded connector 38 and a current meter 40. Computer or other control means, responsive to the measurements of ionic current by meter 40, can be advantageously employed to control ion production by the corona discharger.

[0034] After passing through charging zone 30, aerosol 28 enters the annular space 26 of fractionator 20. Inner wall 22 serves as a first electrode. An outer wall 20 serves as a second electrode of fractionator ~~20~~ 16. Outer wall 20 may be grounded while a voltage U_1 is applied to inner wall 22, producing an electric field F in a generally radially outward direction, as illustrated in FIG. 2. If the particle charger and fractionator are active, (i.e. U_{Cor} and U_1 voltages applied), charged particles 44 in aerosol 28 are deflected by electric field F , and transported in the direction of outer wall (second electrode) 20. Accordingly, ~~electrical~~ electrically charged particles 44 in the aerosol are transported by the electric field F (coulomb force) according to their charge and size when the gas particle partitioner is switched on. This produces a particle free portion or gas stream 46 adjacent inner electrode 22. Charged particles 44 may be deposited on outer wall 20 or transported out of the GPP in a particle laden gas stream 48 adjacent outer electrode 20. In the latter case, the gas particle partitioner can also serve as a particle concentrator. The different modes can be achieved by changing the strength of electric field F or the length L_F of fractionator 16.